

REMARKS

Reconsideration and allowance of this application are respectfully requested in light of the above amendments and the following remarks.

Claims 1-5, 7, 10, 11, 18-21, 23-25, 27, 32, 33, 35, 36, 39, and 41-43 have been amended, and claims 37 and 38 have been canceled.

Support for the amendments is provided for example in the original claims. The amendments have been drafted to overcome the objections applied to claims 35-38 and 41, and withdrawal of these objections is respectfully requested.

Claims 1-9, 11-17, 19-32, and 34-43 were rejected, under 35 USC § 102(e), as being anticipated by Yoshimura (US 6,754,494). Claims 10, 18, and 33 were rejected, under 35 USC § 103(a), as being unpatentable over Yoshimura (US 6,754,494) in view of Johansson et al. (US 2002/0072370).

To the extent these rejections may be deemed applicable to the amended claims, the Applicants respectfully traverse as follows.

Claim 1 defines a method for controlling a plurality of base stations receiving data packets from a communication terminal during a soft handover procedure. According to this method, some or all of the base stations, other than a base station selected as a serving base station, are controlled so as not to forward their received data packets to a control unit. The claimed subject matter supports reducing the signaling communicated between the plurality of base stations and the control unit (see specification page 11, lines 18-22). (References herein to the specification and drawings are for illustrative purposes only and are not intended to limit the scope of the invention to the referenced embodiments.)

The Office Action proposes that Yoshimura's disclosure of a "handover deleting operation" corresponds to the Applicants' claimed subject matter (see Office Action page 3, lines 9-14).

More specifically, the Office Action proposes that Yoshimura discloses deleting, from a soft handover operation, a specific base station that poorly receives a signal communicated by a mobile terminal participating in the soft handover (see page 3, lines 9-14). Based on this proposal, the Office Action appears to conclude that a deleted base station does not (i.e., is controlled so as not to) communicate data packets received from the mobile terminal to the control unit.

Even if it were assumed *arguendo* that Yoshimura may disclose deleting (i.e., disconnecting) a base station from a soft handover operation, as proposed in the Office Action, it is noted that Yoshimura does not disclose that the deleted base station continues to receive data packets from the mobile terminal. To the extent that the Office Action deems the Applicants' claimed data packets as corresponding to Yoshimura's disclosure of path loss and SIR data that is communicated by the mobile terminal to both connected and disconnected base stations, Yoshimura discloses that both the connected and disconnected (i.e., deleted) base stations convey this information to a base station controller so that the controller may: (1) determine whether to add a disconnected base station to the soft handover operation, (2) disconnect a connected base station from the handover operation, and (3) select a handover candidate base station using the conveyed information (see Yoshimura col. 2, lines 24-41).

Thus, Yoshimura does not disclose communicating payload data packets from a mobile terminal to a base station that is disconnected from the mobile terminal in a soft handover operation. And to the extent that the Office Action deems Yoshimura's path loss and SIR data as

corresponding to the Applicants' claimed data packets, Yoshimura discloses that both non-deleted and deleted base stations communicate this information to the base station controller throughout the soft handover. As a result, Yoshimura does not identically disclose the Applicants' claimed subject matter of controlling some or all of a plurality of base stations participating in a soft handover, other than a base station selected as a serving base station, from forwarding data packets received from a communication terminal involved in the soft handover to a control unit.

Accordingly, the Applicants submit that Yoshimura does not anticipate the subject matter defined by claim 1. Independent claim 19 similarly recites the above-mentioned subject matter distinguishing claim 1 from Yoshimura. Therefore, the rejections applied to claims 10, 18, and 33 are obviated, and allowance of claims 1 and 19 and all claims dependent therefrom is warranted.

In order to promote a better understanding of the patentable differences between the Applicants' claimed subject matter and the applied references, the Applicants provide the following additional remarks.

Patentability of the Claims

The independent claims relate to reducing the signaling load on a wired interface between base stations and a control unit (e.g., an RNC). Taking a UTRAN as an exemplary but non-limiting example, the object may be understood as decreasing the lub/lur user traffic on the "last mile" to a Node B, i.e., the link connecting Node B with the RNC or a next hop (see specification page 11, lines 18-21).

In this connection, the present independent claims require that a mobile terminal is simultaneously connected to a plurality of base stations during a soft handover and

communicates with those base stations. The base stations the mobile terminal is communicating with during handover are referred to as the mobile terminal's active set. Accordingly, all base stations of the mobile terminal's active set are receiving uplink data from the mobile terminal which would traditionally be forwarded to the RNC by all base stations (see, for example, the preamble of amended claim 1).

Summary of the Concept of the Claimed Invention

According to the Applicants' claimed invention, only one of the base stations participating in the soft handover of the mobile terminal, the so-called serving base station, is forwarding received data from the mobile terminal to the RNC (e.g., control unit). As outlined in the Applicants' independent claims, this serving base station (e.g., serving Node B) is chosen based on specific selection criteria, such as the uplink channel characteristics between the communication terminal and the respective base stations. Other base stations involved in the soft handover (or at least some of them) are controlled not to forward the data packets received from the mobile terminal to the control unit during the soft handover unless instructed otherwise (see specification page 11, line 25, through page 12, line 5, and page 19, line 25, through page 20, line 2).

Summary of the Teachings of Yoshimura

Yoshimura relates to a mobile communications system, in particular a CDMA mobile communication system, that offers an improved learning-type soft handover control mechanism (see Yoshimura col. 1, lines 7-11). Yoshimura discloses a soft handover procedure in which a base station controller adds and removes connections of mobile stations based on path losses (Yoshimura erroneously refers to "pass loss") and the SIR which overall appears to come close to the update procedures of the active set known for UMTS systems (see col. 1, lines 12-33).

Yoshimura observes that the path loss and the SIR may be subject to sudden changes in regions where a high density of buildings is encountered, such as metropolitan areas (see col. 1, lines 40-45), which potentially leads to the active set of the individual mobile stations having to be updated frequently such that various resources, such as CPU, radio resource, etc., are consumed (see col. 2, lines 4-16). In this connection, Yoshimura seeks to avoid unnecessary resource consumption by avoiding unneeded handovers (see col. 2, lines 17-23).

Yoshimura suggests that the mobile stations report the measured signal qualities of pilot channels, such as path loss, SIR, or the like, to the base station controller through a base station to which they are connected. Those reports are not only sent for base stations to which the mobile base station is connected, but also for those base stations to which it is currently not connected ("non-connected base stations"). In addition the base stations in connection with the mobile station measure the signal quality of the uplink traffic channel from the mobile station and report the measurements to the base station controller, as well (see col. 5, line 57, through col. 6, line 12, and col. 2, lines 23-33).

Based on the reported measurements, the base station controller decides which connected base station is to be "deleted" or which non-connected base station is to be "added" to a respective mobile station for communication.

Anticipation and Obviousness

The subject matter of the Applicants' independent claims is distinct from and non-obvious from the teachings available from Yoshimura.

Yoshimura aims to reduce a signaling load (resulting from additions or deletions of base stations from the active set of the mobile station). Yoshimura, however, fails to consider the forwarding mechanism of the uplink data packets from the base stations, belonging to the active

set (i.e., the base stations to which the mobile terminal is connected during handover), to the control unit (e.g., RNC) and the impact of these data packets on the signaling load of the wired interface between base stations and the control unit.

Thus, it is apparent that Yoshimura fails to disclose determining one serving base station that is to forward the data packets received from the communication terminal to the control unit during soft handover, while controlling some or all other base stations not to forward the data packets.

The Office Action proposes that Yoshimura's "handover deleting operation" controls base stations not to forward data packets, where the control unit 211 of Fig. 2 is the control unit to which data packet information gets forwarded. Furthermore the Office Action proposes that the signal to interference power ratio, SIR, is also a quality channel characteristic that gets evaluated to determine the appropriate base station during handover.

However, the Applicants' claimed handover deleting operation removes a base station from the active set of the respective mobile stations so that the mobile station will no longer transmit any uplink data packets to that base station, although some or all of the base stations controlled not to forward data packets actually receive the data packets from the communication terminal via the air interface.

In view of the above, it is submitted that this application is in condition for allowance, and a notice to that effect is respectfully solicited.

If any issues remain which may best be resolved through a telephone communication, the Examiner is requested to telephone the undersigned at the local Washington, D.C. telephone number listed below.

Respectfully submitted,

/James Edward Ledbetter/

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JEL/DWW/att

James E. Ledbetter
Registration No. 28,732

Attorney Docket No. 007725-06103
Dickinson Wright PLLC
1875 Eye Street, NW, Suite 1200
Washington, DC 20006
Telephone: (202) 659-6966
Facsimile: (202) 659-1559

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